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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,467	03/28/2001	Clifton W. Wood JR.	MI40-326	6353
21567	7590	09/13/2005	EXAMINER	
WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201			HYUN, SOON D	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/820,467	WOOD, CLIFTON W.	
	Examiner	Art Unit	
	Soon D. Hyun	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 85-124 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 86, 97113, and 119-122 is/are allowed.
- 6) ☒ Claim(s) 85,87-96,114-118,123 and 124 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>two IDS</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. 85, 87-96, 114-118, 123, and 124 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snodgrass et al in view of Applicant Admitted Prior Art (AAP).

Regarding claim 85, Snodgrass discloses a method comprising the steps of:

sending a first command (IDCG command, step 212 of FIG. 10) to a plurality of wireless identification devices (RFID devices 36 and 40 in FIG. 1) to select a first subset of the plurality of wireless identification devices in accordance with an arbitration scheme (col. 13, lines 29-32), the first subset associated with a first branch of a search tree corresponding to a tree search scheme (col. 16, lines 19-24), the first command requesting each of the plurality of wireless identification devices of the first subset to respond simultaneously (col. 13, lines 43-46); and

sending a second command (step 228 of FIG. 10) to the plurality of wireless identification devices to select a second subset of the plurality of wireless identification devices in accordance with the arbitration scheme (col. 13, lines 59-65), the second subset associated with a second branch of the search tree corresponding to the tree

search scheme (col. 16, lines 19-24), the first command requesting each of the plurality of wireless identification devices of the second subset to respond.

Snodgrass further discloses that the several responder stations connected to a common medium 32 in FIG. 1 access to the medium simultaneously to communicate with the commander station, therefore, Aloha techniques are used (col. 4, lines 17-18).

However, Snodgrass et al (Snodgrass) does not explicitly teach that the Aloha techniques comprise slotted Aloha, wherein each responder station sends the reply to the interrogator within a randomly selected time slot of a number of slots.

The Applicant Admitted Prior Art (AAP), specification page 4, lines 16-22, discloses that a slotted Aloha scheme is another arbitration scheme which is well known in the art, wherein contending devices are able to access to a common medium within a single randomly selected time slot. It will be apparent to those of skill in the art the slotted Aloha scheme has less collisions than a pure Aloha. Those of skill in the art would have been motivated by the AAP to incorporate a slotted Aloha scheme into a pure Aloha of Snodgrass to reduce collisions.

Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the slotted Aloha arbitration scheme into Snodgrass to improve transmission efficiency with less collisions.

Regarding claims 87 and 88, Snodgrass further discloses the step of receiving the command at multiple devices, the devices receiving the command respectively determining if the random value chosen by the command falls within the specified group

and, if so, sending a reply (an arbitration identification address) to the interrogator (step f of claim 9), if not sending a reply (col. 25, line 10-13).

Regarding claim 89, Snodgrass further teaches a third command (step 232 of FIG. 10) as recited in the claim.

Regarding claim 90, Snodgrass further teaches that the third command comprises a mask as recited in the claim (col. 16, lines 19-32).

Regarding claim 91, Snodgrass further teaches that the first and second commands each comprise a mask and a value to be used to select a portion of an identification number stored in each wireless identification device for comparison to the value (col. 16, lines 19-32).

Regarding claim 92, Snodgrass further teaches that the mask indicates a bit length of the value (col. 16, lines 44-47).

Regarding claim 93, Snodgrass further discloses that the mask corresponds to a level of the search tree, and the value corresponds to a subset of within the level of search tree (col. 16, lines 19-26 and col. 18, lines 2-15).

Regarding claims 94 and 95, Snodgrass further discloses that the mask is applied bitwise to the identification number to select the portion of the identification number (col. 17, lines 39-60).

Regarding claim 96, it is inherently required that the signals from the interrogator to the responder stations indicates a beginning of each of time slot when the system uses the slotted Aloha such that a responder station could access to each time slot.

Regarding claims 114, Snodgrass discloses a wireless identification device comprising:

a receiver (170 in FIG. 3) to receive a first command (IDCG command, step 212 of FIG. 10) comprising a first mask and a first value associated with a search tree of a tree search scheme, the first mask indicating a bit length of first value (col. 16, lines 19-32);

a memory (64 in FIG. 3) to store an identification number (an arbitration number, col. 13, lines 42-43), a first portion of the identification number to be selected using the first mask and to be compared to the first value in response to receiving the first command in accordance with the tree search (col. 16, lines 19-43); and

a transmitter (164 in FIG. 3) to transmit a first response step 220 of FIG. 10).

Snodgrass further discloses that the several responder stations connected to a common medium 32 in FIG. 1 access to the medium simultaneously to communicate with the commander station, therefore, Aloha techniques are used (col. 4, lines 17-18).

However, Snodgrass does not explicitly teach that the Aloha techniques comprise slotted Aloha, wherein each responder station sends the reply to the interrogator within a randomly selected time slot of a number of slots.

The Applicant Admitted Prior Art (AAP), specification page 4, lines 16-22, discloses that a slotted Aloha scheme is another arbitration scheme which is well known in the art, wherein contending devices are able to access to a common medium within a single randomly selected time slot. It will be apparent to those of skill in the art the slotted Aloha scheme has less collisions than a pure Aloha. Those of skill in the art

would have been motivated by the AAP to incorporate a slotted Aloha scheme into a pure Aloha of Snodgrass to reduce collisions.

Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the slotted Aloha arbitration scheme into Snodgrass to improve transmission efficiency with less collisions.

Regarding claims 115-118, Snodgrass further discloses that the receiver is to receive a second command (step 228 of FIG. 10) and second response (step 220 of FIG. 10) as recite in the claims (col. 16, lines 34-43).

Regarding claim 123, Snodgrass discloses an interrogator (commander station 10 in FIG. 1) comprising:

a transmitter circuit (118 in FIG. 2) to send a command (IDCG command, step 212 of FIG. 10) comprising a mask and a value (col. 16, lines 19-32) to a plurality of RFID devices (36 and 40 in FIG. 1) to select a subset of the RFID devices associated with a branch of a search tree in accordance with a tree search scheme (col. 16, lines 19-43), the mask indicating a bit length of the value (col. 16, lines 19-32); a receiver circuit (124 in FIG. 2) to receive a plurality of responses from the subset of RFID devices (FIG. 10); a collision detection circuit (col. 13, lines 51-52).

For coordination pulses, refer to the discussion for claim 96.

For the Aloha, refer to the discussion for the claim 85.

However, Snodgrass does not explicitly teach that the interrogator send the acknowledge signal if a response is received without collision. It is an Official Notice that the acknowledge signal is used in an Aloha scheme.

Regarding claim 124, refer to the discussion for claims 85 and 86.

Allowable Subject Matter

3. Claim 86, 97-113, and 119-122 are allowed.

Claims 60, 80, and 86 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter,

The prior of record fails to teach that the number of possible time slots varies from on specified group to another as recite in claims 60, 80, 97, and 119.

The prior of record fails to teach a method of skipping one level of the search tree as recited in claim 86.

The prior of record fails to teach a method of selecting on time slot from the first number of time slots for first subset and the second of time slots for the second subset as recited in claim 97.

Response to Arguments

4. Applicant's arguments filed 05/27/2005 fully considered but they are not persuasive.

In the Remarks, page 16, Applicant argues that the reference and Applicant's Admitted prior art (AAP) have been improperly combined to formulate the obvious

rejections and there is no teaching or suggestion in the prior art to combine the prior art references. Examiner disagrees.

As discussed for the claim rejections above, Snodgrass teaches that an Aloha scheme (a contention scheme) is used, but Snodgrass does not explicitly teach that the Aloha scheme includes a slotted Aloha scheme.

The Applicant Admitted Prior Art (AAP), specification page 4, lines 16-22, discloses that a slotted Aloha scheme is an arbitration scheme which is well known in the art, wherein many contending devices could access to a common medium within a single randomly selected time slot and it will be apparent to those of skill in the art that the slotted Aloha has less collisions than a pure Aloha. Those of skill in the art would have been motivated by the AAP to incorporate a slotted scheme into a pure Aloha of Snodgrass to reduce collisions.

Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the slotted Aloha arbitration scheme of the AAP into an Aloha scheme of Snodgrass to improve transmission efficiency with less collisions.

Applicant further argues that the obvious rejection results from improper hindsight reconstruction. Examiner disagrees.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does

not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

For the reasons as discussed above, Examiner believes that the claim rejection is proper.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

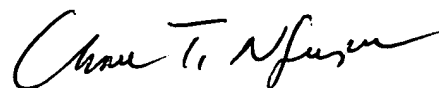
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Soon D. Hyun whose telephone number is 571-272-3121. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2663

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


S. Hyun
09/02/2005



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